

A NEW SPECIES OF *DIXELLA* (DIPTERA: DIXIDAE) FROM  
HONDURAS, CENTRAL AMERICA

T. MICHAEL PETERS

Professor and Curator, Department of Entomology, University of Massachusetts, Amherst, Massachusetts 01003.

---

*Abstract.*—A new species of *Dixella* is described, and the wing and terminalia are illustrated. This species, *Dixella nixiae*, is known from a single male adult. The characteristics which may be used to distinguish it from similar species (*D. scitula* Belkin, Heinemann, and Page; *D. lirio* Dyar and Shannon; *D. limai* Lane; and *D. shannoni* Lane) are presented.

---

During a summer trip through the Republic of Honduras, Central America in 1978, I collected a single dixid adult. It was swept from the vegetation overhanging a small roadside stream high in the mountains between Olancho and Tegucigalpa, more specifically 10 km southwest of Talanga on the Olancho-Tegucigalpa road.

Comparison of the specimen with the species descriptions of known Neotropical dixids revealed that it is a new species of *Dixella*, but very close to the *scitula-lirio-limai-shannoni* group. The following description of this new species uses the morphological terms as defined in Peters and Cook (1966).

*Dixella nixiae* Peters, NEW SPECIES

Figs. 1A-1C

Type.—Holotype, ♂. A roadside creek, name unknown, on the road from Olancho to Tegucigalpa. Approximately 10 kilometers southwest of Talanga in the Republic of Honduras. Specimen was collected on August 8, 1978 by T. Michael Peters. In the T. Michael Peters dixid collection at the Department of Entomology, University of Massachusetts, Amherst, Mass.

Diagnosis.—Based upon descriptions in Lane (1953) and in Belkin et al. (1970) there are 4 other species within the genus *Dixella* that may be confused with *D. nixiae*. They are *D. limai* Lane, *D. shannoni* Lane, *D. lirio* Dyar and Shannon, and *D. scitula* Belkin, Heinemann, and Page. These may be distinguished as follows: *Dixella lirio* has the 9th abdominal sclerite much darker than the abdomen while in *D. nixiae* these sclerites are all the

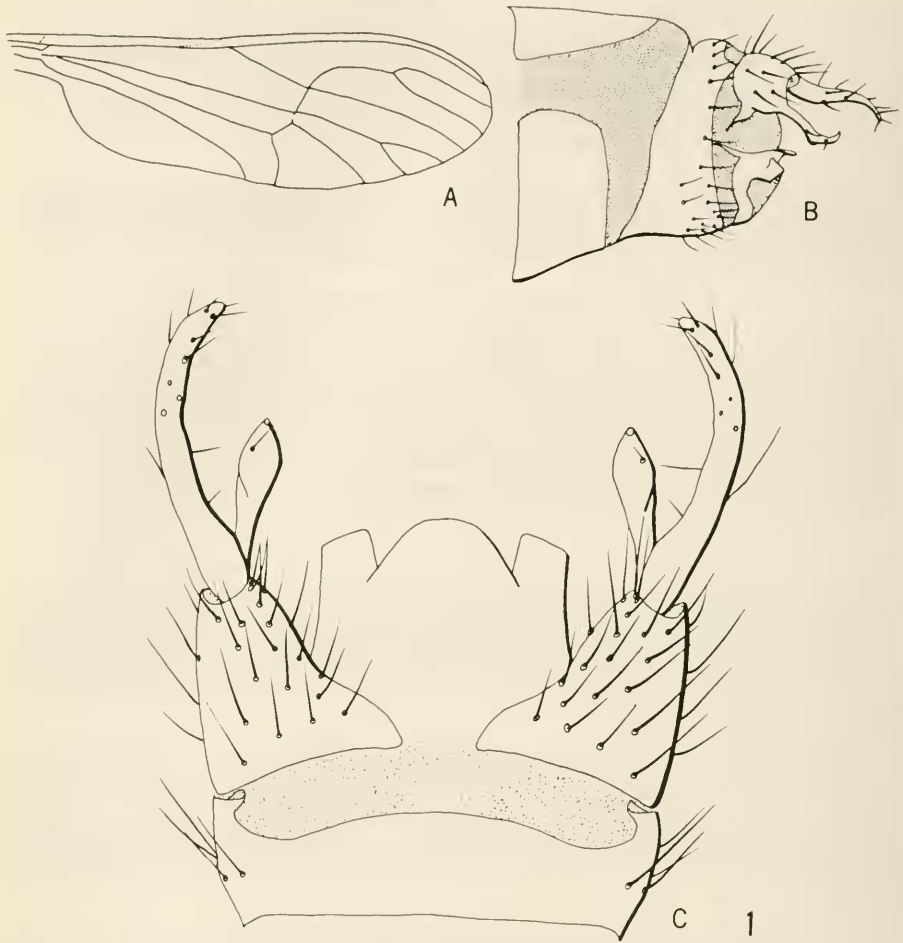


Fig. 1. *Dixella nixiae*. A, Wing (length, 3.25 mm). B, Lateral view of rotated male terminalia. C, Same, dorsal view.

same medium brown. *Dixella scitula* has 3–4 teeth on the venter of each claw, in *D. nixiae* there are 2 on each pro-, 4 on each meso-, and 5 on each metathoracic claw. In *D. limai* m-cu is complete, but broken in *D. nixiae*. The ratio of  $R_{2+3}$ :  $R_s$  in *D. shannoni* is 1.00:0.68, but 1.0:1.0 in *D. nixiae*.

Specimens of *D. nixiae* without antennae could be confused with several species in the genus *Nothodixa*, particularly *N. chilensis* (Alexander), *N. nitida* (Edwards), *N. atrovittata* (Edwards), and *N. ensifera* (Edwards). *Dixella nixiae* may be distinguished from *Nothodixa chilensis* by lack of a spot on the wing and by proportionately much longer dististyle than apical lobe of basistyle (in *N. chilensis* they are subequal); from *N. nitida* by the

greater length of dististyle over basistyle and  $M_{3+4}$ :Mst wing vein ratio (1.00:1.27 in *N. nitida*, 1.00:0.45 in *D. nixiae*), also m-cu is complete in *N. nitida* and broken in *D. nixiae*; from *N. atrovittata* by the lighter abdominal tergite color (brown versus black in *atrovittata*) and by more sharply pointed dististyle (blunt in *N. atrovittata*; rather pointed in *D. nixiae*); and from *N. ensifera* by very short penis sheath (in *N. ensifera* it is twice the length of the abdomen, in *D. nixiae* it's the length of tergite 9).

**Male.**—**Head:** Uniformly medium brown and covered with fine microtrichia, with row of 3 moderately long setae bordering eye on dorsum; another row of 3 shorter setae located more mesally; and row of 3 short setae along posterior margin of eyes. Frontoclypeus and labrum without setae.

**Wing** (Fig. 1A): Non-spotted, clear; veins all bearing single row of setae, except medius for its basal  $\frac{3}{4}$  before r-m, cubitus for its basal  $\frac{4}{5}$  before its branching and anal for its basal  $\frac{3}{5}$ . Costal wing margin bears 3 rows of setae to  $R_3$ , there reduced to 2 rows up to  $M_{1+2}$ , single row for length of trailing edge of wing.  $R_{2+3}$  originates just opposite r-m, which runs directly into broken m-cu.

**Halter:** Uniformly medium brown.

**Legs:** Uniformly light brown except distal ends of the metathoracic femora noticeably darker. All tarsi without basal recurved spiniform setae. Distal spiniform setae absent on tarsi of prothoracic leg; present on tarsomeres 1–3 of meso- and metathoracic legs. Each claw of prothoracic leg with 2 ventral teeth, each claw of mesothoracic leg with 4 ventral teeth, and 5 ventral teeth on claws of metathoracic legs. Ratio of femur:tibia:tarsus length of prothoracic leg, 1.00:1.00:1.52; of mesothoracic leg, 1.00:0.92:1.54; of metathoracic leg, 1.00:0.93:1.73.

**Thorax:** Scutum with 3 dark brown vittae, slightly lighter between; with row of 4 setae on median line, first seta separated by gap from posterior 3. Line of 8 setae separating each lateral vitta from medial vitta. Two setae on anterior margin of scutum. Scutellum with transverse row of 9 moderately long setae, medial seta originating anterior to rest. Pre-episternum II dark brown but lighter dorsally, without setae, slightly pruinose. Posterior pronotum with 2 setae just below scutum.

**Abdomen:** Tergite and sternite 9 fused into unified ring. Single transverse row of posteriorly projecting setae on sternal portion of sclerite becomes a double row at point where sternite and tergite are demarcated in most other species. Tergite 10 bears non-segmented cercal lobes, which are bluntly quadrate and bear no setae. Basistyle broadly subtriangular in dorsal view of rotated specimen, its basal lobe not visible dorsally. Apical lobe of basistyle narrow at base, expanded toward tip, then tapering to end in a blunt point when viewed from dorsum. Dististyle slightly thicker at base, gradually constricted in basal  $\frac{1}{3}$ , distal  $\frac{2}{3}$  only slightly tapered, ending in blunt point. In dorsal view dististyle slightly scimitar-shaped, curvature towards

the other dististyle (Fig. 1C). In lateral view a sharp basal lobe on basistyle directed laterad rather than mesad (as in most other species). Apical lobe as long as main body of basistyle; tip turned up. Dististyle in lateral view as in Fig. 1B.

Female.—Unknown.

Remarks.—This species is named after my wife, Norma, whose nickname is Nixie. The name is derived from "Nichts-nutz" meaning good-for-nothing, a term of endearment originated by her family when she was young.

#### LITERATURE CITED

- Belkin, J. N., S. J. Heinemann, and W. A. Page. 1970. Mosquito studies (Diptera, Culicidae). XXI. The Culicidae of Jamaica. *Contrib. Am. Entomol. Inst. (Ann Arbor)* 6: 1-458.
- Lane, J. 1953. Neotropical Culicidae. Univ. of São Paulo, Brazil. V. 1, 548 pp.
- Peters, T. M. and E. F. Cook. 1966. The Nearctic Dixidae. *Misc. Publ. Entomol. Soc. Am.* 5: 233-278.